AMSAT News Service Weekly Bulletins
Issue: ANS-357
Date: 2007-12-23
Sources: amsat-ans-2007-ans-357-weekly.txt

AMSAT NEWS SERVICE
ANS-357

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* W2RS SKN
* OSCAR 11 Report
* AMSAT YEAR End
* ARISS Status - 18 December 2007
* President's message
* Holiday Message

SB SAT @ AMSAT $ANS-357.01
W2RS SKN

AMSAT News Service Bulletin 357.01
From AMSAT HQ SILVER SPRING, MD.
December 23, 2007
To All RADIO AMATEURS
BID: $ANS-357.01

Reminder!
Participating in OSCAR SKN is fun and simple. No scoring and no need to send in a log. Just operate CW through any OSCAR, using a straight hand key, at any time between 0000 and 2400 UTC on January 1, 2008.

In keeping with the friendly nature of this event, all participants are encouraged to nominate someone they worked for Best Fist. Your nominee need not have the best fist you heard, just the best of those you worked. Please send your nomination to W2RS at w2rs@amsat.org. Those nominated will be recognized in an AMSAT News Service bulletin, and in The AMSAT Journal.

[ANS thanks Ray, W2RS, for the above information]

/EX

SB SAT @ AMSAT $ANS-357.02
OSCAR-11 REPORT

AMSAT News Service Bulletin 357.02
From AMSAT HQ SILVER SPRING, MD.
December 23, 2007
To All RADIO AMATEURS
BID: $ANS-357.02

OSCAR-11 REPORT

20 December 2007

RECEPTION REPORTS REQUESTED!

Please send reception reports to xxxxx@amsat.org (please replace xxxxx by g3cwv) or post to amsat-bb. If you are able to record the satellite as a WAV file, please do so, but let me know what you have, before sending it!

If you need to hear what the satellite sounds like, please visit my website www.users.zetnet.co.uk/clivew/ The satellite transmits on 145.826 M Hz. set receiver to NBFM.

During the period 15 November to 19 December 2007 the satellite has been heard from 18 to 20 November. Signals were variable in strength, mostly weak.

The real time clock has lost a further 4.29 days since 08 October. When last heard it was 74.26876 days slow.

I am indebted to Kevin WA6FWF, Peter ZL3TC, Armando N8IGJ and Thomas HB0SKA for their reports. Many thanks.

Eclipses have continued and are expected until mid January 2008. Although the maximum duration of the current eclipses is less than those earlier this year, it is doubtful whether the satellite will be heard for any sustained period. Even in continuous sunlight during September and October the satellite was unable to support continuous operation.

It is likely than the satellite will only be heard by chance, by stations listening for other satellites on 145.826 Mhz.

The current status of the satel lite, is that all the analogue telemetry channels, 0 to 59 are zero, ie they have failed. The status channels 60 to 67 are still working. The real time clock is showing a large accumulated error, although over short periods timekeeping is accurate to a few seconds per month. The day of the month has a bit stuck at 'one' so the day of the month may show an error of +40 days for some dates. The time display has switched into 12 hour mode. Unfortunately, there is no AM/PM indicator, since the time display format was designed for 24 hour mode.
More data is required to determine exactly when the date changes.

The spacecraft computer and active attitude control system have switched OFF, ie. the satellite' attitude is controlled only by the passive gravity boom gradient, and the satellite is free to spin at any speed. When telemetry was last received it showed that one of the solar arrays had failed, and there was a large unexp lained current drain on the main 14 volt bus. After 23 years in orbit the battery has undergone around 100,000 partial charge/discharge cycles, and observations suggest that it cannot power the satellite during eclipses, or sometimes during periods of poor solar attitude.

The watchdog timer now operates on a 20 day cycle. The ON/OFF times have tended to be very consistent. The average of many observations show this to be 20.7 days, ie. 10.3 days ON followed by 10.4 days OFF. However, poor solar attitude may result may result in a low 14 volt line supply, which may cause the beacon to switch OFF prematurely, and reset the watchdog timer cycle. When this occurs, the beacon is OFF for 20.7 days.

The Beacon frequencies are -

VHF 145.826 MHz. AFSK FM ASCII Telemetry

UHF 435.025 MHz. OFF

S-band 2401.5 MHz. OFF

Listeners to OSCAR-11 may be interested in visiting my website. If you need to know what OSC AR-11 should sound like, there is a short audio clip for you to hear. There is an example of the latest telemetry received from the satellite. The website contains an archive of news & telemetry data. It also contains details about using a soundcard or hardware demodulators for data capture. There is software for capturing data, and decoding ASCII telemetry. The URL is www.users.zetnet.co.uk/clivew/

If you place this bulletin on a terrestrial packet network, please use the bulletin identifier $BID:U2RPT140.CWV, to prevent duplication.

[ANS thanks Clive, G3CWV for the above information]

/EX

SB SAT @ AMSAT $ANS-357.03
AMSAT YEAR End

AMSAT News Service Bulletin 357.03
From AMSAT HQ SILVER SPRING, MD.
December 23, 2007
To All RADIO AMATEURS
BID: $ANS-357.03

Are you looking for an end of the year tax deduction? Have you thought about renewing your AMSAT Membership? What about joining the President's Club? What about a spanking brand new enclosure for the LVB tracker board? There is even an AMSAT branded clock and weather station.

The AMSAT online store is awaiting your visit. Please follow the direct link below to make your purchase.

http://www.amsat-na.com/categories.php

Afraid of embedded links... go to amsat.org and click on the Online Store from the left margin.

73...bruce
AMSAT Store Manager

[ANS thanks Bruce, KK5DO for the above information]

/EX

SB SAT @ AMSAT $ANS-357.04
ARISS Status - 18 December 2007

AMSAT News Service Bulletin 357.04
From AMSAT HQ SILVER SPRING, MD.
December 23, 2007
To All RADIO AMATEURS
BID: $ANS-357.04

1. ARISS - Russian School Contact

Kursk State Polytechnic University in Kursk, Russia experienced an Amateur Radio on the International Space Station (ARISS) contact on Friday, December 14. The students and faculty had previously participated in other ARISS contacts from Kursk, Sochi and Mt. Elbrus with Expedition 15 commander Fyodor Yurchikhin, RN3FI. On this occasion, the students were scheduled to speak with flight engineerYuri Malenchenko, RK3DUP.

2. ARISS School Application Updated

The Amateur Radio on the International Space Station (ARISS) team has finalized the updated ARISS school contact application forms. The updated forms have been posted on the ARISS Web site. See: http://www.rac.ca/ariss/oindex.htm

3. Kenwood Radio Software Approved

The Amateur Radio on the International Space Station (ARISS) team's request to have the Memory Control Program (MCP) software added to the Expedition 17 SSC load has been approved. Once onboard, a crew member will be tasked to restore the Kenwood radio to its proper launch configuration.

4. ARISS SuitSat-2 Status

The Amateur Radio on the International Space Station (ARISS) team has obtained solar panels for the SuitSat-2 project. Testing continues on the RF and power systems.
A SuitSat-2 status presentation was given at the 2007 Radio Amateur Satellite Corporation (AMSAT) Space Symposium held in Pittsburgh in October. It has been posted on the AMSAT Web site. See: http://www.amsat.org/amsat/ariss/Presentations/AMSAT%20Symposiums/2007%20Symposium/Suitsat%202%20Rev%20E%20Symp%2007.pdf

5. ARRL Article on STS-122 Mission

The American Radio Relay League (ARRL) ran an article on the STS-122 shuttle mission status. The shuttle will deliver the Columbus module with the installed Amateur Radio on the International Space Station (ARISS) antennas. See: http://www.arrl.org/news/stories/2007/12/11/100/?nc=1

[ANS thanks Carol, KB3LKI, for the above information]

/EX

SB SAT @ AMSAT $ANS-357.05
President's report

AMSAT News Service Bulletin 357.05
From AMSAT HQ SILVER SPRING, MD.
December 23, 2007
To All RADIO AMATEURS
BID: $ANS-357.05

President's Report From the 2007 AMSAT-NA Annual Meeting

2007 Symposium, Pittsburgh, Pennsylvania

Over the past year AMSAT has developed a well-defined mission and vision for an exciting future of amateur radio in space. In fact, some of the items we have discussed here at the Symposium may perhaps become known as the weekend that changed amateur radio.

In response to input from the members, AMSAT's Board of Directors and Officers have undertaken a clearly defined Mission and Vision of our current and on-going work:

AMSAT's Mission Statement

+ AMSAT designs, builds and operates experimental satellites and promotes space education as a non-profit, volunteer organization.
+ AMSAT develops and fosters partnerships with government, industry, educational institutions and fellow amateur radio societies.
+ AMSAT leads the way on technical and scientific innovation.
+ AMSAT develops and fosters an environment encouraging the training and development of designers and operators.

AMSAT's Vision Statement

+ AMSAT will deploy high earth orbit (HEO) satellites, initially with daily coverage, evolving to continuous coverage.
+ AMSAT will participate in human space missions.
+ AMSAT will support a stream of LEO satellites which are developed in cooperation with the educational community and other amateur satellite groups.

The New Reality

Going forward, we are realizing a new reality of the future of Amateur Radio in space. There is a distinct shift away from the aegis of government/military sponsored spaceflight to a field that will be more and more driven by commercial consideration. This development signifies that space missions will become driven by a business-case model. While our new missions will provide great new services to the Amateur Radio community, we cannot afford to pay millions for them.

The reality is that no one will pay for more "toys" for us to play with. To gain the funding necessary our missions must excite the funding sources. AMSAT will be required to fit into the business-case models of just about every launch opportunity we wish to pursue in the future.

Your Board of Directors and Officers have identified two key areas which capture the attention and imagination of potential funding sources:

+ Education - The Phase IV geosynchronous satellite will enable TDRS-like support of ARISS. Ten minute school contacts will grow to hours-long contact with the Space Station. We are working on an expanded curriculum with the ARISS and NASA teams. We are planning the establishment of the AMSAT Institute which will train educators to bring space into the classroom using AMSAT's Phase IV facilities in conjunction with ARISS.

+ Emergency Communications - The Advanced Communications Payload is being co-developed as spaceflight and ground station gear available for rapid deployment or pre-positioning into disaster areas to provide 365/24/7 communication capability. This proposal is gaining some attention within the Homeland Security organization.

AMSAT's Current Development Plans

Consistent with our Vision Statement we are continuing development of

Phase III satellites. Budget and staffing for the Eagle satellite will continue for 2007-2008.

AMSAT-NA is contributing staff and money toward completing AMSAT-DL's Phase 3 Express Satellite in 2008. AMSAT-NA teamed with AMSAT-UK to donate 25,000 Euros to AMSAT-DL for the completion of P3E.

Phase IV is not a replacement program at the expense of Phase III. The same transponder gear already in development for Eagle and P3E remains applicable to Phase IV. The new commercial launch reality mentioned previously indicates we may actually be able to be launched earlier to a high orbit if we fit into the Intelsat ride sharing model. We need to be ready for this event.

Phase IV will enable AMSAT to concentrate more fully on the development of space communications. The Intelsat platform will provide hundreds of watts of power for 15 years eliminating the need for AMSAT to provide solar cells, it will perform the station keeping and earth pointing tasks, internal housekeeping will be simplified.

Once we have shown funding sources what AMSAT is capable of additional launch opportunities will arise. Intelsat can drop off sub-payloads into LEO, GTO, or GEO orbits on their way to their primary mission. There are more doors open to the future if we realize and pursue the new reality.

I invite you join AMSAT's exciting future. As we recognize and work within the new reality of commercial spaceflight we will provide exciting new services for amateur radio, emergency preparedness, and education. The side effect of developing "services" will be that we still gain what everyone is asking - high orbit transponders for us to use and enjoy. AMSAT is to satellites what the Wright brothers were to flight. We are "Amateur" only in the sense that we are not paid in much the same sense that Olympic athletes are "Amateurs."

73,

Rick Hamly, W2GPS
President, AMSAT-NA

[ANS thanks Rick, W2GPS for the above information]

/EX

SB SAT @ AMSAT $ANS-357.06
Holiday Greetings from the AMSAT News Service

AMSAT News Service Bulletin 357.06
>From AMSAT HQ SILVER SPRING, MD.
December 23, 2007
To All RADIO AMATEURS
BID: $ANS-357.06

The crew at the AMSAT News Service wishes you and your family the best of the holiday season and for an excellent, prosperous New Year too! Thanks for reading! Please continue to send news and comments to the ans-editor@amsat.org mailbox.

The weekly ANS bulletins are also posted on-line at:
http://www.amsat.org/amsat-new/news/ so you can read them there if you are away from your e-mail.

Best wishes and Season's Greetings from all of us!

Gould WA4SXM Vice-President, User Services
Lee   KU4OS, Editor
Dee   NB2F, Editor
JoAnne K9JKM, Editor

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining donors
to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Dee Interdonato, NB2F